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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/066,892	02/04/2002	Timothy A. Sullivan	25091A	4887
22889	7590	07/01/2004	EXAMINER	
OWENS CORNING 2790 COLUMBUS ROAD GRANVILLE, OH 43023			HOFFMANN, JOHN M	
			ART UNIT	PAPER NUMBER
			1731	

DATE MAILED: 07/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/066,892	Applicant(s) SULLIVAN ET AL.	
	Examiner John Hoffmann	Art Unit 1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The terms "tip section" and "section spacing" are indefinite as to their meanings. First, the terms are not defined in the specification. One of ordinary skill looking at the disclosure as a whole would not be able to tell what is meant by the terms. Whereas it is clear that the terms cover the specific embodiments of the specification, it is impossible to tell if the claims are limited to the specific sections and spacings of the embodiments. It is noted that figure 4 has six spacings (88), but the upper 88's point to supports, whereas the lower 88's point to part of the tip plate. It is unclear if the term "section spacing" can encompass both structures. The biggest confusion for examiner: can the tip sections and the section spacings be arbitrary sections/spacings?

Most specifically: as seen in the prior art rejection below, Examiner takes the position that the prior art has tip sections and section spacing, that reads on the claims below. Although the prior art is different from Applicant's invention, Examiner has no way of telling whether Applicant will be of the position that the prior art does not read on the claims. Similarly, the public has no way of knowing whether a particular bushing

reads on applicant's claim, because the public has no way of knowing whether a given portion of a tip plate is a "tip section" or if a given spacing is a "section spacing".

MOST importantly, Glaser US Pat 3334981 indicates that a "tip section" is the same thing as a feeder floor (col. 4, lines 12-13 and 22). But Applicant's usage is not consistent with this the already established definition of Glaser. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term is indefinite because the specification does not clearly redefine the term.

Claim 14: there is confusing antecedent basis for "the support" of line 2.

Claim 21: it is unclear what "therefrom" refers back to: one of the ends, both of the ends, or the end supports plus the ends.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-24 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over O'Brien- Bernini 5312470 (hereinafter "OBB").

Looking at figures 1 and 2 of OBB: the flat structure (that tips 14 are built into) is the tip plate. Figure 2 shows six tips, the section of the 2nd and 3rd tips is a first tip section. The section of the 4th and 5th tips is a second tip section, and the spacing between these two sections is the "section spacing". The middle support (22) is the "lateral support". The rest of the limitations are clearly present when looking at OBB as a whole.

Alternatively, if the sections and spacing are not tip sections or section spacing, it would have been obvious that they are tip sections and a section spacing because: 1) there is no definition for "tip section" or "section spacing" (either in the specification or prior art) which exclude the OBB features, 2) they are essentially the same as disclosed by applicant, and 3) the only difference between Applicant's features and OBB would be their dimensions.

Claim 2: See col. 2, lines 14-17.

Claims 3-4: see col. 2, lines 46-50.

Claim 5: see figure 2.

Claim 6: Applicant's figure 5 has nipples (98).

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 7 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Higginbotham 3841853.

Figures 1-2 of Higginbotham shows the bushing body, throat and the elongated tip plate. 40 is support extending longitudinally, and 42 is the lateral support. The two supports delimit the bushing plate into four tip sections.

If Higginbotham does not explicitly show all the above features, it would have been obvious to one of ordinary skill to provide such, because Higginbotham is essentially the same as Applicant's invention.

Claims 8 and 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Higginbotham in view of Glaser 3334981.

Higginbotham does not disclose much structure around the supports. Glaser teaches to use a ceramic material to not modify the flow of electricity (col. 5, lines 26-31). IT would have been obvious to use a ceramic material between the supports and the tip plate in Higginbotham, so as to no modify the flow of electricity. As to being thermally insulated: it is deemed that the ceramic results in a degree of thermal insulation. IT is noted that even applicant's ceramic material has at least some thermal conduction. The degree of insulation is not claimed.

Claim 11: It would have been obvious to use hollow supports in the Higginbotham process, so as to transfer excess heat as taught by Glasser at col. 5, lines 50-58.

Claim 12: Features 84 and 85 of Glaser are deemed to be nipples in as much as Applicant's nipples 98 of figure 5.

Claim 13 is clearly met.

Claim 14: Looking to figure 3 of Glaser, 84 and 85 would be the hollow members and 80 would be the fluid conduit between the hollow members.

Claims 8 -15 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Brien-Bernini 5312470 (OBB) in view of Higginbotham 3841853.

OBB discloses the invention as indicated above, but not the longitudinal support. Higginbotham teaches to have both lengthwise and crosswise supports to reduce sag

(col. 4, lines 24-37) – just like applicant has. It would have been obvious to include further supports lengthwise to support the OBB bushing as taught by Higinbotham to reduce sag.

Claim 15: for the length-wise support(s), it would have been obvious to have the length wise supports substantially similar to the crosswise supports. The supports are U-shaped because they have a shape like a U – they have a bottom and two-sides. It is noted that applicant's U-shape does not have a curved bottom – as U's do. The legs would correspond to manifold 24 as shown on figure 4 of OBB. The conduit clearly extends downward and across the support (i.e. itself).

Claims 16-17 and 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Slonaker 4055406 in view of Higginbotham 3841853.

Slonaker discloses the invention except for the lateral support. See for example figures 4-7 of Slonaker. Higginbotham teaches to have crosswise and lengthwise supports (col. 4, lines 22-36) so as to reduce sag. It would have been obvious to include both sort of supports in the Slonaker invention, so as to reduce sag.

Claim 17: See col. 4, lines 5-9

Claim 20: it would have been obvious to have all the conduits to be supplied from the same fluid system (such as a municipal water supply) because it is simpler than having 2 or more water supplies. Alternatively, communications is an action, not structure – the claim language does not require any particular relationship.

Claim 21, the supports have nipples in as much as Applicant's 98's are nipples.

Claim 22 would inherently have to be met.

Claim 23: it would have been obvious to have the lateral support substantially as shown figure 4: 73-73 would be the two hollow members and 68 would be conduit. It is clear that the supporting structure would be the horizontal conduit – and then there would have to be additional structure on either end: one to bring the coolant up to the conduit, and other to return it back down.

Claim 24: IN a slightly different interpretation 73-68-73 would constitute an upside-down U shape. (Alternatively it has a shape of a U in that it has two vertical portions and a horizontal portion connecting the two vertical portions) The claim does not specify in what way the it is shaped like a U. Each of 73 would be a leg. The hollow members would be whatever tube is used to supply the fluid to one 73. As to the other 73 – it would have been obvious to use another tube to remove the fluid from the other 73 – so that it doesn't go onto the floor and get people's shoes wet.

Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Slonaker 4055406 in view of Higginbotham 3841853 as applied to claims 16 and 20 and further in view of OBB (US patent 5312470).

Claims 18-19 It would have been obvious to use the OBB Zirconia coating rather than the ceramic rod – for the advantages that OBB discloses (See other rejections regarding OBB)

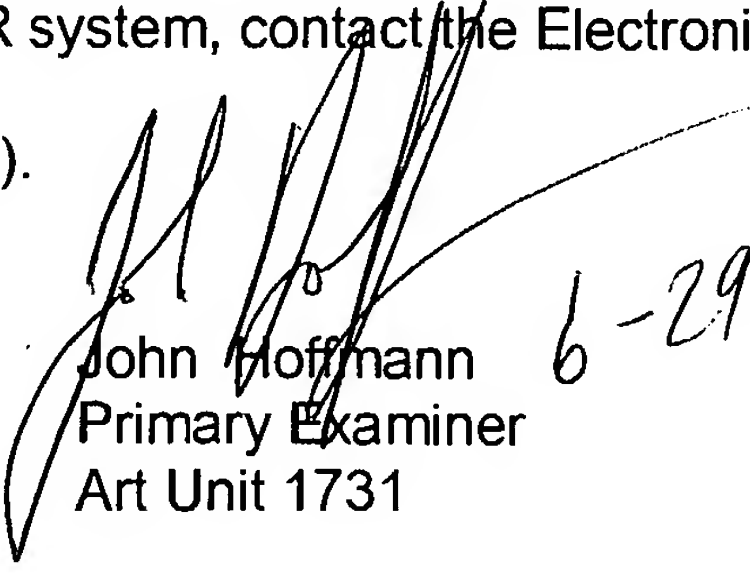
Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. DeLong, Bour and Brosch are cited as being related to the disclosed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


John Hoffmann
Primary Examiner
Art Unit 1731

6-29-04

jmh